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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,475	07/27/2001	Satoshi Okamoto	2185-0558P	6322

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

YOON, TAE H

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/915,475	<b>Applicant(s)</b> OKAMOTO ET AL.	
	<b>Examiner</b> Tae H Yoon	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 8,9 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-7 and 10-12, drawn to LC polyester solution and a film thereof, classified in class 528, subclass 495+.
- II. Claims 8, 9 and 13, drawn to a multiplayer PC board and a process of making thereof, classified in class 427, subclass 58+.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in making a self-standing polarized film.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Bailey on September 9, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-7 and 10-12. Affirmation of this election must be made by applicant in replying

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to this Office action. Claims 8, 9 and 13 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jin (US 5,508,069).

Jin teaches the instant LC polyester solution in p-chlorophenol in abstract and at col. 8, lines 24-31. Thus, the instant invention lacks novelty.

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Claims 1-5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0 672 721.

EP teaches the instant LC polyester in formula 1 (p. 3) and formula 14 (p. 9). The use of tetrachlorophenol in making a solution thereof is taught at page 9, lines 19-21. Thus, the instant invention lacks novelty.

Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kasatani et al (US 4,529,565).

Kasatani et al teach the instant LC polyester in abstract and examples and at col. 3, line 17 to col. 4, line 59. A solution of said LC polyester in a solvent mixture containing 40 wt% of p-chlorophenol is taught at col. 8, lines 40-45. Various films for flexible PC boards and electric parts are taught at col. 8, lines 30-32, and an invention in a product-by-process claim is a product, not a process. See *In re Brown*, 459 F2d 531, 173 USPQ 685 (CCPA 1972) and *In re Thorpe*, 777 F2d 695, 697, 227 USPQ 964 (Fed. Cir. 1985). Thus, the instant invention lacks novelty.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as obvious over Kasatani et al (US 4,529,565) in view of Jin (US 5,508,069).

The instant invention further recites solution casting over Kasatani et al who teach various films for PC boards and electric parts. Jin teaches the instant solution casting of the LC polyester solution in making an electronic layered part at col. 8, lines 22-31.

It would have been obvious to one skilled in the art at the time of invention to utilize the spin-coating of Jin in making various films for flexible PC boards and electric parts of Kasatani et al since such method is a routine practice in the art.

Claim 4 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Walpita et al (US 5,962,122) or Murakami et al (US 5,408,347).

Walpita et al teach LC polyester films in abstract and at col. 4, line 48. Murakami et al teach the same in examples. An invention in a product-by-process claim is a product, not a process. Thus, the instant invention lacks novelty.

Claims 1-7 and 10-12 are rejected under 35 U.S.C. 103(a) as obvious over Murakami et al (US 5,408,347) and Jin (US 5,508,069), Yoda et al (US 5,943,110), EP 0 672 721 or Kasatani et al (US 4,529,565) and further in view of Walpita et al (US 5,962,122).

Murakami et al teach the instant LC polyesters and solution casting thereof in examples.

The instant invention further recites a chlorine-substituted phenol as a solvent and the use of fillers such as silica and barium titanate over Murakami et al. However, the use of the instant solvent in making a solution of LC polyesters is well known as taught by Jin, Yoda et al, EP 0 672 721 and Kasatani et al.

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Walpita et al teach LC polyesters having dielectric powders such as barium titanate or strontium titanate in abstract and at col. 2, lines 36-59. Said powders have a particle size of 0.2-10 microns (col. 5, line 64 to col. 6, line 10). Walpita et al also teach employing other fillers such as silica at col. 4, line 27, but are silent as to the size of said silica. However, it would be obvious to use the claimed particle size of silica in Walpita et al since Walpita et al teach thin layer and since dielectric powders have the instant size.

It would have been obvious to one skilled in the art at the time of invention to utilize a chlorine-substituted phenol of Jin, Yoda et al, EP 0 672 721 and Kasatani et al in Murakami et al since the use of said chlorine-substituted phenol in making a solution of LC polyesters is a well known practice, or to utilize LC polyesters of Murakami et al in Jin, Yoda et al, EP 0 672 721 and Kasatani et al since Jin, Yoda et al, EP 0 672 721 and Kasatani et al teach the use of various LC polyesters. Furthermore, it would have been obvious to one skilled in the art at the time of invention to utilize dielectric powders such as barium titanate or strontium titanate or silica of Walpita et al in the solution of Jin, Yoda et al, EP 0 672 721 or Kasatani et al and Murakami et al since the use of said dielectric powders or silica (filler) in various films for PC boards and electric parts is well known practice in the art.

Claims 1, 4-7 and 10-12 are rejected under 35 U.S.C. 103(a) as obvious over Walpita et al (US 5,962,122) in view of Jin (US 5,508,069), Yoda et al (US 5,943,110), EP 0 672 721 or Kasatani et al (US 4,529,565).

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Murakami et al teach the instant LC polyesters having dielectric powders and solution casting thereof in examples. Murakami et al also teach employing fillers such as silica.

The instant invention further recites a chlorine-substituted phenol as a solvent over Walpita et al. However, the use of the instant solvent in making a solution of LC polyesters is well known as taught by Jin, Yoda et al, EP 0 672 721 and Kasatani et al.

It would have been obvious to one skilled in the art at the time of invention to utilize a chlorine-substituted phenol of Jin, Yoda et al, EP 0 672 721 and Kasatani et al in Walpita et al since the use of said chlorine-substituted phenol in making a solution of LC polyesters is a well known practice, and to use silica since Walpita et al teach employing such filler.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as obvious over Yoda et al (US 5,943,110).

Yoda et al teach various LC polyester solutions and casting thereof at cols. 57-63. Various monomers for LC polyesters are taught throughout the patent. Various solvents such as para-chlorophenol and concentrations thereof are taught at col. 51, lines 23-41.

It would have been obvious to one skilled in the art at the time of invention to utilize utilize para-chlorophenol as a solvent in examples and to use a LC polyester having the instant monomers in Yoda et al since Yoda et al teach such modification.




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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
Tae H Yoon  
Primary Examiner  
Art Unit 1714

THY/September 12, 2003